**Introduction**

* Automation is the introduction of ‘labor-saving technology’, where automatic equipment and technology is used to make processes run with minimal or no human assistance.
* ~~In our presentation we will discuss how automation has affected the Australian job industry.~~

**Unethical**

* As the use of automation in many different industries across Australia grows, employees fear being made redundant and being displaced by the introduction of automated machinery and technology.
* However, automation has also allowed for exponential growth in many industries in terms of productivity, competition and cost-effectiveness.
* As we can see in this table, a wide range of jobs have been or are likely to be affected by automation. I’ll pass it off to Solomon to talk about this in more detail.

**Stakeholders**

* As our society becomes more technologically advanced we move closer and closer towards a completely automated society.
* When compared to a human worker, automation tends to be much more efficient and effective when completing tasks, so it is extremely cost-effective for businesses to administer automation
* But, when a business implements automation, the initial workers are supplanted.
* Automation typically affects:
* People working in mines
  + - It’s estimated that the workforce of a mine would be reduced by
    - 30-40% due to fully autonomous equipment
* And factory or assembly line workers
  + - Over 1 million people were employed in this industry as of 2005, and by 2015 this number had dropped to 93,000, and continues to deplete.
* As well as:
* telemarketers
* checkout operators
* clerical workers (For example, Office Workers and Library Assistants)
* These positions involve routine work, which has the highest susceptibility to becoming automated, as it tends to follow explicit rules which can be easily implemented into code. Such positions are often retained by those from low-socio economic backgrounds, and automation could leave these persons at the risk of being unable to provide for themselves and their families.
* So what and who is protecting these people from losing their jobs? Kurt will tell us

**Protected?**

* In terms of laws, there’s very little protection for an employee in Australia in the case that their job has been replaced by a machine.
* As there are no specific laws around automation in Australia, the best protection is the set of redundancy laws outlined in the Fair Work Act, 2009.
* These state that in the case of redundancy the employer must first consult with the employee and if reasonable and available, they must offer them another position within the organisation.
* These rules provide very little actual protection to the employee beyond where the employer has unfairly dismissed them.
* Australia is not alone in its lack of legal protection in this scenario. The US and many other countries have even less protection and because the laws that have been proposed in the past come with side effects that restrict industry growth, it is unlikely further protection will come anytime in the foreseeable future.
* Solomon will now cover some of the impacts.

**Impacts**

Automation has multiple negative connotations when applied to our society:

* + It pushes people to upskill, however some citizens may lack the funds to do this
  + It eliminates sources of income
  + It negates education of certain fields
* Environmental
  + Facilities needed to produce automation requires landscape areas, and these areas must be deforested and levelled first so the facilities can be built. The production of automation also produces pollution
* Automation machinery typically runs on:
  + - * Electricity
      * Or fuel
* Both are typically created from fossil fuels, which have an inherently adverse impact on the environment
* I’ll hand over to Duncan to discuss some possible solutions.

**Solutions**

* The issue of automation affecting occupations has been well identified by several nations
* Each offering their own solution to the issue
* Although everyone would obviously have their own way of approaching the issue, most fall into 1 of 3 categories
  + Firstly: “Creating new job opportunities through aggressive investment”
    - This involves diverting a sizable portion of resources into creating occupations that are inoperable by automated machines
    - Occupations which require high level decision making, judgement calls and human empathy, jobs that are not feasible with modern technology
  + Secondly: “Addressing increased rate of change with more nimble education systems”
    - A refactoring of education infrastructure will be required to prepare people for the rapid evolution of technology. Ensuring the current “one-time” education model does not result in an obsolete career prospect
  + And thirdly: “Enhancing social safety nets to smooth automation impacts”
    - This solution requires large scale government investment in a safety net for workers who decide to make the change. Thus, they are able to survive in the current economic climate while “jobless” during said transition
* //NEXT SLIDE
* These are the most prominent suggested solutions. However, none are without their flaws
* Flaws that make detract from each of their viability and sustainability
  + For the first. The issue with “creating new job opportunities through aggressive investment” is that:
    - It does not take into account citizens with lower socioeconomic status. Where the routine/maintenance based jobs being taken over by automation are the only feasible jobs they can obtain
  + As for the second. As for “addressing increased rate of change with more nimble education systems”:
    - The automation of mundane/routine occupations does push the population to strive for more upskilling occupations
    - However upskilling takes time, and is slower than the current rate of technological advancement
    - The efficiency of “nimbleness” of the education system will have a lesser impact since its the people are the ones lagging behind
  + And for the third. And for the final solution of “enhancing social safety nets to smooth automation impacts”:
    - Currently, it is unclear the level of investment the government will need to make into the “safety net”, as the ease of transition into a feasible alternative differs from person to person
    - Underestimate and it may leave citizens in economic failure, overestimate and it may leave the country in economic failure

**Conclusion**

* Thanks for listening.
* Are there any questions?